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# Chapter 4

## TRANSPORTATION AND TRAFFIC SAFETY

Much effort and funding has been devoted to improving the transportation networks and improving the safety of transportation in northern Delaware. Wilmington Metropolitan Area Planning Council (WILMAPCO) and the Delaware Department of Transportation (DelDOT) plan, fund, and implement the transportation and traffic safety improvements in the area. The discussions below outline the current transportation and traffic safety projects that are underway along the scenic byway corridor. New actions and strategies for the byway will build on these transportation projects. Current and future transportation projects within the region will be implemented in accordance with Governor Ruth Ann Minner's Livable Delaware initiative directing transportation funding for improvements to growth zones.

### 4.1 Livable Delaware Initiative

On March 28, 2001, Governor Ruth Ann Minner signed Executive Order 14, which introduced the Livable Delaware initiative. The Livable Delaware initiative is the Minner Administration's blueprint for fighting suburban sprawl and building on the 1999 blueprint "Shaping Delaware's Future: Strategies for State Policies and Spending" As the Governor stated, the initiative is a "comprehensive strategy to get sprawl under control and direct intelligent growth to areas where the state, county and local governments are most prepared for new development in terms of infrastructure, services and thoughtful planning."

The Livable Delaware initiative outlined eleven goals and required each state department and agency to complete an implementation plan to address these goals. DelDOT identified thirty-one activities that directly supported one or more of the Livable Delaware goals. Notable among these activities are the State Scenic & Historic Highways Program (of which the Brandywine Valley Scenic Byway is a part), DelDOT's policies involving Context Sensitive Design, Tree Preservation Policy, Pedestrian Policy, Bicycle Policy, Road Design Manual Update, and Traffic Calming Program. These policies and programs support the Brandywine Valley Scenic Byway goals and are in various states of development and implementation. Perhaps most all-embracing is the department's Context Sensitive Design Policy.

DelDOT's Context Sensitive Design Policy (D-07) became effective on June 30, 2001. The purpose of the policy is to plan and design transportation projects so they fit well into the communities they are supposed to serve. As a result of the policy, all new transportation project planning and design work is required to take a Context Sensitive Design approach. The policy includes setting aside five percent of project construction costs for improvements to the community or environment immediately adjacent in order to respond to quality-of-life issues.

## 4.2 Transportation Projects – City of Wilmington

The following transportation projects, either located within or adjacent to the Brandywine Valley Scenic Byway study area, were identified in WILMAPCO's Transportation Improvement Program (TIP) for 2005 through 2007. This TIP represents a continued shift from the traditional highway building emphasis of prior years to a more multi-modal approach to transportation planning and programming. Many of the projects provide an increase in transit facilities, an expansion in the network of sidewalks, bike paths and greenways, and an improvement in the appearance of all transportation designs.

### PROJECTS UNDER CONSTRUCTION

#### *Wilmington Signal Improvement Project (Citywide)*

The Wilmington Signal Improvement Project will upgrade traffic signals citywide. Signals along major arterials are being upgraded with demand-activated, computer-controlled signals, and existing sidewalks at signalized intersections are being modified to meet requirements of the Americans with Disabilities Act. The project is currently in various stages of completion.

### PLANNED PROJECTS

#### *12<sup>th</sup> Street Connector*

The 12<sup>th</sup> Street Connector project will provide an alternate route into the Central Business District and promote economic development on the north bank of the Brandywine Creek. The planning and engineering components are currently being developed.

#### *King and Orange Streets Transit Corridors (Martin Luther King, Jr. Boulevard to 13<sup>th</sup> Street)*

The project along the King and Orange Streets Transit Corridors will include major transit and pedestrian upgrades such as new bus shelters, lighting, transit information, and curb and sidewalk improvements. The planning component is expected to be developed between 2007 and 2009.

### PLANNED PROJECTS NOT YET IN THE CAPITAL TRANSPORTATION PROGRAM

#### *Delaware Avenue, Phase II (Monroe Street to Harrison Street)*

Planned work in Phase II of the Delaware Avenue improvements will provide vehicular, transit, and pedestrian improvements along the roadway, which is within the byway, including realignment and re-striping of lanes, signal improvements, new signage, brick sidewalks, pedestrian lighting, and street trees.

***Market Street, Phase IV****(11<sup>th</sup> Street to 16<sup>th</sup> Street)*

Phase IV of the Market Street improvement project will complete pedestrian and streetscape enhancements along portions of Market Street that have not yet been addressed.

**TRANSPORTATION ENHANCEMENT PROJECTS*****Trolley Square Streetscape***

The Trolley Square Streetscape project will include improvements along the Trolley Square area, such as sidewalk replacement and landscaping. The design phase of the project began in May 2004.

***Wilmington Wayfinding System***

This project to upgrade Wilmington's wayfinding system will provide cultural, historical, and landmark signage to improve wayfinding throughout the City of Wilmington. Design guidelines for the proposed wayfinding system have been completed. Detailed design and engineering is underway, and construction is expected to occur in spring, 2005. The proposed system is confined to the city but has implications for visitor attractions throughout the byway.

**PROJECTS IN CONCEPTUAL PLANNING (NOT IN TIP)*****Shipley Street Revitalization Plan****(Martin Luther King, Jr. Boulevard to 10<sup>th</sup> Street)*

The Shipley Street Revitalization Plan will identify public streetscape improvements to support the development of commercial and residential initiatives along Shipley Street. Its central location and amount of available parking makes Shipley Street attractive to economic development. The plan will be presented to the public and city administration in the near future.

**COMPLETED PROJECTS*****Delaware Avenue Gateway Project, Phase I****(Delaware Avenue / 10<sup>th</sup> Street, Madison Street to Walnut Street)*

The Delaware Avenue Gateway Project was an important enhancement project in the urban core of the byway. This project is intended to help improve downtown traffic circulation, increase pedestrian safety between the downtown and residential neighborhoods, and improve the appearance of this major gateway into the City. Proposed project elements included pedestrian, transit, and vehicular circulation improvements, such as adjusting the direction to provide two-way traffic on Delaware Avenue / 10<sup>th</sup> Street between Washington Street and Walnut Street, realigning and re-striping of lanes, and reconstructing sidewalks with lighting and street trees.

A limited portion of the proposed project was completed in Spring 2003. Additional improvements are planned but not yet designed or funded. The Brandywine Valley Scenic Byway has proposed that a portion of the project be implemented as a demonstration project for the Byway. The Byway demonstration project will request DelDOT Transportation Enhancement Funds to construct safe pedestrian access to the Delaware Children's Theater and to improve sidewalks and streetscaping at this I95 Gateway to the Byway.

### ***Delaware Avenue, Phase I Addition/former DuPont Buildings***

*(11<sup>th</sup> Street, from West Street to Orange Street; Orange Street from 10<sup>th</sup> Street to 11<sup>th</sup> Street; and Jefferson Street from 11<sup>th</sup> Street to 12<sup>th</sup> Street)*

Phase I of the proposed improvement along Delaware Avenue provided significant streetscape improvements, including trees, pedestrian lighting, and new sidewalks in the heart of Wilmington's portion of the byway. The project was completed in Summer 2003.

### ***Market Street, Phase I***

*(9<sup>th</sup> Street to 11<sup>th</sup> Street)*

Phase I of the redesign of Market Street re-introduced vehicles to Market Street and added parking along Wilmington's Central Business District spine to promote economic development and improve the appearance and function of this historic district. Project elements included restoring two-way traffic to support retail activity, increasing the availability of on-street parking, and constructing pedestrian and streetscape enhancements along the street. Phase I included the 900 and 1000 blocks of Market Street, as well as 10<sup>th</sup> Street in front of the library. It was completed in Fall 2002.

### ***Union and Lincoln Streets***

*(4<sup>th</sup> Street to Pennsylvania Avenue)*

Pedestrian, streetscape, and transit improvements were constructed to support this important residential and retail area between 4<sup>th</sup> Street and Pennsylvania Avenue (including cross streets). Improvements included a gateway arch near 4<sup>th</sup> and Lincoln Streets to identify Little Italy, pedestrian-level lighting, street trees, and the installation of state-of-the-art traffic signals to accommodate the needs of both pedestrians and drivers. The project was completed in Spring 2001. Safe pedestrian crossings are still needed at Pennsylvania Ave and Union Street north and south of the train bridge.

### ***West 4<sup>th</sup> Street***

*(Harrison Street to Jackson Street)*

Pedestrian, streetscape, and transit improvements on 4<sup>th</sup> Street west of I-95 were constructed to improve the appearance and function of this important gateway to the city. Enhancements included the installation of street trees, pedestrian-level lighting, and sidewalk and transit improvements. The project was completed in Summer 2001.

### ***Wilmington Rubber-Tire Trolley***

The Wilmington Rubber-Tire Trolley project provided mass transit service oriented to visitors, residents, tourists and business workers to improve circulation between the Wilmington Central Business District and the developing Riverfront. The project uses replica trolleys and is intended to support tourism and economic development. The trolley began service in December 2002.

## 4.3 Transportation Projects – Kennett Pike (Route 52)

### PLANNED PROJECTS

#### *Northern Delaware Greenway*

The Northern Delaware Greenway is an initiative spearheaded by Delaware Greenways, Inc. in partnership with Delaware State Parks (Delaware Division of Parks and Recreation), Delaware Department of Transportation (DelDOT), New Castle County and the City of Wilmington. The Northern Delaware Greenway is intended to provide linkages between communities, parks, cultural sites, and open space throughout northern New Castle County. The first phase of the project is concentrated across northern Wilmington, spanning ten miles from Fox Point State Park on the Delaware River to the Brandywine Creek. The greenway links existing and proposed trails within the parks, through open space, and along roadways. A suspended bike path across the Brandywine Creek is planned as part of the new Tyler McConnell Bridge project. When the bridge is completed the Northern Delaware Greenway will directly connect to the Brandywine Valley Scenic Byway at both Route 100 and Route 52.

In 1997, the State of Delaware designated Kennett Pike as the Kennett Pike Greenway and included it on the official state greenway and bicycle touring maps. Bicycling is promoted and popular along Kennett Pike's wide shoulders north of Greenville, and bicycle lanes have been striped along some portions of the roadway.

The Kennett Pike Greenway is a key component of the larger Northern Delaware Greenway. It extends the greenway trail system from the Brandywine Creek at Rockford Park north through New Castle County to the Delaware-Pennsylvania state line. Kennett Pike connects to the Brandywine at Rockford Park via the Bancroft Parkway, described in the description of Segment 5 of the byway. Kennett Pike connects to the Northern Delaware Greenway at the intersection of Route 141 and Route 100. From here, as noted above, it will connect to the new Tyler McConnell Bridge project adjacent to Hagley Museum via a new separated bike pedestrian bridge crossing of the Brandywine Creek.

The goals and strategies of the Brandywine Valley Scenic Byway are in full accordance with the implementation of the Northern Delaware Greenway. Phased implementation of the Northern Delaware Greenway is continuing across the county to the east and west as a long-term initiative.

#### *Centreville Traffic Calming as part of the Centreville Village Plan*

The village of Centreville is an important community along the northern portion of the Brandywine Valley Scenic Byway. For several years, residents, businesses, and landowners in the village have been involved in a comprehensive planning process to create a Centreville Village Plan. The purpose of the plan is to enhance the character of the village while addressing issues of aesthetics, circulation, traffic calming, adaptive reuse of historic buildings, and future growth of the village.

The Centreville Village Plan proposes using a variety of innovative traffic calming design techniques to slow down traffic and enhance the visual quality of the streetscape. The plan's gateway project proposed the installation of a landscaped median at both ends of the village and helped to segment Kennett Pike into distinguishable speed zones, in effect defining the village section of the roadway. Additional proposed streetscape improvements at intersections and elsewhere will help narrow the perceived width of the roadway through town, slowing traffic and clearly differentiating it from the rural stretches to the north and south. The gateway project has been a joint effort of DelDOT, WILMAPCO, and the Centreville Civic Association.

The proposed traffic calming measures envisioned in the Centreville Village Plan are a model for the roadway design guidelines envisioned for the Brandywine Valley Scenic Byway. The initial gateway portions of the Centreville Village Plan have been constructed. Additional traffic calming and streetscape improvements are in the planning phases. DelDOT and WILMAPCO are working with the community to achieve consensus on a plan.

### ***Kennett Pike Corridor Transit Options*** (part of Centreville Village Plan)

The former Wilmington & Northern Railroad line which parallels much of the northern portion of the byway has been suggested as a possible future commuter mass transit corridor connecting Chester County in Pennsylvania, and Greenville and Wilmington in Delaware. This historic railroad line crosses Kennett Pike at-grade in Greenville and winds north through the Brandywine Valley hills, crossing Montchanin Road and paralleling the northern portion of the byway. It has many geometric and other constraints compared with typical transit corridors, and it is only single-tracked.

It would be a significant challenge, though not necessarily impossible, for a commuter line along the route to achieve running times sufficiently fast to attract commuters away from their cars. This, along with other significant challenges associated with cost, property impacts, ownership implications, road crossing configurations, noise, potential station locations, traffic and parking, and environmental constraints, would have to be studied in detail before it could be officially designated as a potentially viable future mass transit corridor.

Existing freight operations on the line are limited, and thus it could potentially be shared with a transit provider. Technologically, such a service could be similar to SEPTA's regional rail lines, or, since maneuverability would be an issue, SEPTA's suburban trolley lines. Diesel light rail vehicles such as those to be used on the

Southern New Jersey Regional Light Rail Line (Camden to Trenton) could potentially be operated on the freight line if the freight and passenger services were completely time-separated (i.e., freight service in overnight hours only). Passenger service in this corridor could be operated as an extension of, or a connection to, the R2 Wilmington line or the R2 Media/Elwyn line (via Chadds Ford Junction). The success of recent commuter rail extensions into Delaware, particularly the R3 to Newark, sets an interesting precedent for considering this option.

Alternatively, it might be more feasible to consider using the historic railroad line as a visitor attraction, conducting seasonal and weekend rail excursions between the villages and attractions along the route. Identifying an experienced private or non-profit entity interested in taking on such an initiative would be the first step in exploring such an option.

### ***Bridge 1-001 and Bridge 1-001A on Rising Sun Road Over Brandywine Creek***

The infrastructure improvement project related to the bridges on Rising Sun Road over the Brandywine will rehabilitate existing steel truss members and substructure of the bridges; place a high performance deck overlay; make safety improvements at approaches; fill scour holes; and rehabilitate existing stone masonry abutments.

### ***Tyler McConnell Bridge, Route 141, Kennett Pike to U.S. Route 202***

Route 141 is a principal arterial roadway that functions as a major collector-distributor serving locally generated traffic and distributing traffic to and from significant employment centers located along the Route 141 corridor, east, north, and west of Wilmington. Route 141 crosses under Kennett Pike in Segment 5 of the byway, just south of Greenville, and at an at-grade intersection with Montchanin Road in Segment 15, just to the east. A sixteen-month DelDOT study (June 2000 to September 2001) and community task force achieved consensus on a proposed series of phased recommendations for accommodating existing and future transportation needs related to the bridge and its study area, centered on Route 141 from Route 100 (Montchanin Road) to Alapocas Drive, east of the Brandywine.

The Tyler McConnell Bridge project will have a direct influence upon the Brandywine Valley Scenic Byway. The first phase at the intersection of Route 141 and Route 100 (Montchanin Road) has been planned, designed and construction completed with great sensitivity to the historic context of the surrounding area that includes Hagley Museum and St. Joseph's Church and cemetery. It includes brick pedestrian crosswalks, sidewalks, landscaped medians, context sensitive lighting and extensive roadside landscaping. A large stone wall, typical of the Brandywine Valley, was built in keeping with the context of Hagley Museum to separate private large lot residences from the expanded highway as it approaches the bridge from the West.

Long-term recommendations propose construction of a new two-lane bridge across the Brandywine adjacent to the existing bridge. Potential designs for the new bridge have been studied with a goal of implementing a design that is aesthetically and historically consistent with the character of the area. Figg Engineering, a nationally acclaimed leader in the field of context sensitive designed bridges, has designed a

bridge incorporating many historical replica design elements from Hagley Museum and the Brandywine Valley in the project. Figg Engineering uses a “top down” construction method to carefully build the bridge with the least impact to the adjacent environment.

To preserve the quality of life for the adjacent community and the nearby scenic and historic Brandywine Valley and its attractions, a boulevard design rather than a beltway will be used along the entire Route 141 corridor using the Route 100 (Montchanin Road) and Route 141 intersection as a model.

The Tyler McConnell Bridge project has been controversial and has drawn intense public scrutiny. The project goal has been to meet the transportation needs of the study area while preserving and enhancing local quality of life. It seeks to foster improved safety, mobility, and access within the area while preserving and protecting the character of surrounding communities and historic villages; protecting the historic, archaeological and natural environment; and accommodating economic development (including tourism) and anticipated future growth. Objectives seek to address issues related to public outreach, safety, aesthetics and design, mobility, bicycle/pedestrian access, congestion, the environment, and natural, historic and cultural resources. Planning and design for the project is still ongoing.

#### ***Bridge 1B on Kennett Pike (Route 52) Over Railroad East of Route 141***

Bridge 1B on Kennett Pike is a concrete bridge over an abandoned railroad right-of-way parallel and just south of Route 141. The proposed improvements will replace the existing superstructure with pre-stressed concrete beams and a concrete deck. Minor safety improvements to the approach roadway are included in the plans along with a bus pull over for the Middle School, pedestrian crosswalks, sidewalks, commuter parking lot improvements and landscaping. The bridge improvements have been planned to begin in DelDOT’s 2005 fiscal year. The Byway Landscape Consultants have been working with DelDOT to improve the design of the project based on the recommendations in the Landscape Management Plan that has been prepared in conjunction with this Corridor Management Plan.

#### ***Bridge 1-068 and Bridge 1-002 on Rockland Road over Brandywine Creek***

Bridges 1-068 and 1-002 are located in the Rockland Historic District. Bridge 1-068 will require structural repairs. Bridge 1-002 will receive cosmetic improvements and repairs, which will prolong the life of this historic structure. In both cases, repairs will take into account the historic surrounding. Bridge 1-068 improvements will include replacement of the superstructure with pre-stressed concrete beams and stone-faced bridge rails, construction of two wingwalls, and repair of the supporting substructure. DelDOT is working with members of the Byway Landscape Committee on preserving the historic sycamore trees adjacent to this bridge and with the Delaware State Division of Historic Affairs on preserving the historic walls. Bridge 1-002 improvements will include repair of the concrete beam encasements, replacement of deck joint seals, rebuilding the stone walls, stream corridor stabilization and waterproofing the deck.



## COMPLETED PROJECTS

### *Centreville Gateways Project*

Landscaped medians have been installed on Kennett Pike at both ends of the village of Centreville. The gateways are an initial phase of implementation of the *Centreville Village Plan*, discussed above. They are intended help slow traffic down and enhance the visual quality of the streetscape by clearly defining the village section of the roadway and differentiating it from the stretches of Kennett Pike to the north and south. The gateway project has been a joint effort of DelDOT, WILMAPCO, and the Centreville Civic Association.

### *Bridge 1-088, Bridge 1-089, Bridge 1-090, Bridge 1-091, and Bridge 1-093 on Snuff Mill Road*

Bridges 1-088, 1-089, 1-090, 1-091, and 1-093 are located on Snuff's Mill Road, north of Centerville and just west of the byway. Snuff Mill Road is a small two-lane rural road paralleling a small winding stream. The five bridges cross the stream and are comprised of concrete boxes or culverts with stone abutments/sidewalls. All five bridges have been determined to be structurally deficient, and have been recently replaced. Historic preservation has been an issue in the design and implementation of the project.

The Bridge 1-088 project, near Old Kennett Road and furthest from the byway (Kennett Pike), consisted of improvements that included replacing the existing concrete deck; stabilizing the existing substructure; preserving and repointing the existing stone masonry; repainting the steel beams; and installing scour countermeasures. The existing concrete deck was replaced with a new reinforced concrete box culvert.

The remaining bridges have been replaced with either concrete boxes (Bridges 1-090, 091, and 093) or a concrete rigid frame (Bridge 1-089) with stone parapets and wing walls. Roadway slope failures have also be fixed. Snuff Mill Road from Old Kennett Road to Kennett Pike has been repaved as part of the project.

### *Smith's Bridge Reconstruction on Smith's Bridge Road*

On Smith's Bridge Road east of its intersection with Montchanin Road, a new covered bridge has been constructed across the Brandywine Creek. The new bridge is a reconstruction of an historic covered bridge that had been destroyed by fire several years ago. The new work was undertaken by DelDOT and recreates the historic appearance and character of the original bridge while upgrading its structural capacity to meet modern transportation requirements.

## 4.4 Transportation Projects – Montchanin Road (Route 100)

### PLANNED PROJECTS

#### *Barley Mill Road (Route 141) and Montchanin Road Intersection Improvements*

The Route 141 intersection with Montchanin Road has been redesigned to increase the number of turning lanes and improve the access to Hagley Museum. It was recently completed in December 2004 including brick crosswalks, sidewalks, landscaped medians, context sensitive lighting and roadside landscaping.

## 4.5 Accident Analysis

Reported accident data was provided by the State of Delaware Department of Transportation for the calendar years 2000, 2001, and 2002. The yearly average data for these three years was computed and is used as a basis for the accident evaluation along the byway. All of the numbers listed below referring to numbers of accidents represent yearly averages unless otherwise stated.

The accident data for the byway is presented for the three major roadway sections as defined in Chapter 3 above, Description of the Brandywine Valley Scenic Byway. The accident analysis identified specific locations with five or more reported crashes each year. The *Manual of Uniform Traffic Control Devices* (MUTCD) establishes five or more repeated crashes as part of the criteria for determining the need for a traffic signal. Therefore, this number of accidents was thought to be a reasonable threshold limit for identifying potential high accident locations for the purposes of this report. A more in-depth accident analysis study could be conducted to examine accident rates based on vehicles entering an intersection or vehicle miles traveled on a roadway segment.

### CITY OF WILMINGTON (ROUTE 52)

The portion of the byway within the City of Wilmington encompasses 2.9 miles of urban Delaware and Pennsylvania Avenues and includes many closely-spaced intersections along its length. Last year there were 198 reported accidents along this portion of roadway, of which 52 involved injuries. Of the 198 reported accidents, 114 of the accidents (58%) were categorized as angle accidents, and 42 (21%) were categorized as rear end accidents.

The MUTCD establishes criteria for the installation of traffic signals at a particular location based upon the number of accidents that occurred there. As noted above, intersections with five or more accidents per year are recommended for review for the installation of a signal system. The following intersections along the byway within the city were identified as having an average of more than five accidents per year:

- Route 52 (11<sup>th</sup> and 12<sup>th</sup> Street) and Walnut Street

- Route 52 (Delaware Avenue, 11<sup>th</sup> and 12<sup>th</sup> Streets) and West Street
- Route 52 (Delaware Avenue/Pennsylvania Avenue) and Van Buren Street
- Route 52 (Pennsylvania Avenue) and McDowell Street
- Route 52 (Pennsylvania Avenue) and Clayton Street
- Route 52 (Pennsylvania Avenue) and Rodney Street
- Route 52 (Pennsylvania Avenue) and Union Street

### KENNETT PIKE (ROUTE 52)

The Kennett Pike portion of the byway includes 4.5 miles of suburban and rural roadway. Intersections are spaced at much greater distances than found in downtown Wilmington. Along this segment last year, there were 70 reported accidents, 17 of which involved injuries. Of the 70 reported accidents, 36 of the accidents (51%) were categorized as rear end accidents, and 20 (29%) were categorized as angle accidents. The intersection of Kennett Pike and Campbell Road/Kirk Road (Route 82) in Segment 8 just south of the Wilmington Country Club was the only intersection that was identified as having an average of more than 5 accidents per year. This intersection currently has a traffic signal.

### MONTCHANIN ROAD (ROUTE 100)

Montchanin Road from the Delaware-Pennsylvania state line south to its intersection with Kennett Pike includes 4.8 miles of suburban and rural roadway. Intersections are infrequent and are spaced at greater distances than along other sections of the byway. Last year there were 40 reported accidents on this segment with 12 involving injuries. Of the 40 reported accidents, 11 of the accidents (28%) were categorized as angle accidents, 10 (25%) were categorized as rear end accidents and 15 (38%) were categorized as other (an accident type other than: head on, rear end, side swipe, or angle). The intersection of Montchanin Road and Route 141 was identified as having an average of more than 5 accidents per year. This intersection currently has a traffic signal and improvements have been completed as part of Phase I the Tyler McConnell Bridge project, discussed above.

## 4.6 Access Management

New development projects will continue to request access to both Kennett Pike and Montchanin Roads. Delaware Greenways and members of the Byway's Landscape Committee have been working with DelDOT to reduce the potential visual intrusion of future driveways and private road entrances onto both Kennett Pike and Delaware Avenue including:

1. Efforts to reduce the length and width of the access lanes – this can sometimes be accomplished by reducing the design speed to more accurately reflect the desired operating speed along the byway.
2. Use of concrete pavers in turning lanes rather than asphalt to differentiate travel lanes from turning lanes, and use of concrete flush curbs or mountable curbs at the edge of pavement to hold the pavers in.

3. Adding landscaped splitter islands to reduce the amount of overall pavement.
4. Use of granite header curbs to eliminate the need for a gutter pan.
5. Use of warning signs to eliminate the need for turning lanes especially in rural areas.

## 4.7 Approach to Resolving Traffic Safety and Transportation Issues along the Byway

As indicated in the description of planned and programmed projects above, Byway leaders are actively involved in working with DelDOT to ensure that the state's Context Sensitive Design policy is applied appropriately along the Brandywine Valley Scenic Byway. The Kennett Pike Association, Delaware Greenways, Centreville Civic Association, neighborhood associations, and other interest groups have been actively and aggressively representing the Byway's interests in negotiating complex transportation and traffic safety projects.

For example a planned 1990's roadway widening project in Greenville turned into a more carefully crafted enhancement project that incorporated brick and granite pavers, attractive lighting, landscaped medians, and special roadway details. This successful outcome, achieved through difficult and sensitive negotiations, has since led to cooperative and supportive efforts by DelDOT on many of the projects noted above – a model for the region. Particular issues that may arise within the planning horizon are discussed in Chapter 6.